

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 11105 2/22/2001]

[Docket No. 2000-NM-142-AD; Amendment 39-12112; AD 2001-03-08]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model CL-600-2B19 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Bombardier Model CL-600-2B19 series airplanes, that currently requires, among other actions, certain revisions to the Airplane Flight Manual; and removal of all elevator flutter dampers. That AD also requires installation of new elevator flutter dampers, and replacement of shear pins and shear links with new improved shear pins and shear links. This amendment adds airplanes to the applicability of the existing AD; and requires replacing certain shear pins with new, improved shear pins; and, for certain airplanes, inspection of the maintenance records to determine replacement status of the shear pins; and corrective actions, if necessary. This amendment is prompted by issuance of mandatory continuing airworthiness information by a foreign civil airworthiness authority. The actions specified by this AD are intended to prevent premature failure of the shear pins of the elevator damper, which may increase the likelihood of jamming or restricting movement of the elevator and the resultant adverse effect on controllability of the airplane.

DATES: Effective March 29, 2001.

The incorporation by reference of certain publications, as listed in the regulations, is approved by the Director of the Federal Register as of March 29, 2001.

The incorporation by reference of certain other publications, as listed in the regulations, was approved previously by the Director of the Federal Register as of April 3, 1998 (63 FR 9928, February 27, 1998).

ADDRESSES: The service information referenced in this AD may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087 Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Serge Napoleon, Aerospace Engineer, ANE-171, FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7512; fax (516) 568-2716.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 98-04-45, amendment 39-10356 (63 FR 9928, February 27, 1998), which is applicable to certain Bombardier Model CL-600-2B19 series airplanes, was published in the **Federal Register** on October 31, 2000 (65 FR 64898). The action proposed to continue to require, among other actions, certain revisions to the Airplane Flight Manual (AFM); and removal of all elevator flutter dampers. The action also proposed to continue to require installation of new elevator flutter dampers, and replacement of shear pins and shear links with new improved shear

pins and shear links. The action also proposed to add airplanes to the applicability of the existing AD; and to require replacing certain shear pins with new, improved shear pins; and, for certain airplanes, inspection of the maintenance records to determine replacement status of the shear pins; and corrective actions, if necessary.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Conclusion

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Cost Impact

There are approximately 214 Bombardier Model CL-600-2B19 series airplanes of U.S. registry that will be affected by this AD.

The removal of the elevator dampers and the AFM revision that are currently required by AD 98-04-45, and retained in this AD, take approximately 6 work hours per airplane to accomplish, at an average rate of \$60 per work hour. The FAA estimates that all affected U.S. operators have previously accomplished these requirements, therefore, the future cost impact of these requirements is minimal.

The inspections that are currently required by AD 98-04-45, and retained in this AD, take approximately 26 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the inspection requirements of AD 98-04-05 is estimated to be \$1,560 per airplane.

The installation of flutter dampers that is currently required by AD 98-04-45 takes approximately 12 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts will be provided at no cost to the operators by the manufacturer. Based on these figures, the cost impact of the installation currently required AD 98-04-45 is estimated to be \$720 per airplane.

The new actions (i.e., replacement of the shear pins, check of maintenance records, and AFM revision) that are required in this AD will take approximately 21 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts are estimated to cost \$801. Based on these figures, the cost impact of these new requirements of this AD on U.S. operators is estimated to be \$441,054, or \$2,061 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-10356 (63 FR 9928, February 27, 1998), and by adding a new airworthiness directive (AD), amendment 39-12112, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-03-08 BOMBARDIER, INC. (Formerly Canadair): Amendment 39-12112. Docket 2000-NM-142-AD. Supersedes AD 98-04-45, Amendment 39-10356.

Applicability: Model CL-600-2B19 series airplanes, having serial numbers 7003 through 7357 inclusive, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (i) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent premature failure of the shear pins of the elevator damper, which may increase the likelihood of jamming or restricting movement of the elevator and the resultant adverse effect on controllability of the airplane, accomplish the following:

RESTATEMENT OF ACTIONS REQUIRED BY AD 98-04-45:

Airplane Flight Manual (AFM) Revision Required by AD 98-04-45

(a) For airplanes having serial numbers 7003 through 7054 inclusive: Within 30 days after January 26, 1994 (the effective date of AD 94-01-09, amendment 39-8791), revise the Limitations Section of the FAA-approved AFM to include the following restrictions of altitude and airspeed operations under conditions of single or double hydraulic system failure; and advise the flight crew of these revised limits. Revision of the AFM may be accomplished by inserting a copy of this AD or AFM Revision 34, dated June 12, 1995, in the AFM. Restrictions of altitude and airspeed operations under conditions of single or double hydraulic system failure are listed in the following tables.

Table 1: SINGLE HYDRAULIC SYSTEM FAILURE

Altitude Limit (Maximum)	Airspeed Limit (Maximum)
31,000 feet	0.55 Mach (199 KIAS)
30,000 feet	0.55 Mach (204 KIAS)
28,000 feet	0.55 Mach (213 KIAS)
26,000 feet	0.55 Mach (222 KIAS)
24,000 feet	0.55 Mach (232 KIAS)
22,000 feet	0.55 Mach (241 KIAS)
20,000 feet and below	252 KIAS

Table 2: DOUBLE HYDRAULIC SYSTEM FAILURE

Altitude Limit (Maximum)	Airspeed Limit (Maximum)
10,000 feet	200 KIAS

NOTE 2: The restrictions described in the AFM Temporary Revision (TR) RJ/30, dated December 16, 1993, meet the requirements of this paragraph. Therefore, inserting a copy of TR RJ/30 in lieu of this AD in the AFM is considered an acceptable means of compliance with this paragraph.

(b) Within 7 days after December 14, 1994 (the effective date of AD 94-24-02, amendment 39-9075), accomplish the requirements of paragraphs (b)(1) and (b)(2) of this AD.

(1) Remove the elevator dampers in accordance with Canadair Regional Jet Alert Service Bulletin S.B. A601R-27-041, dated October 28, 1994.

(2) Revise the Limitations Section of the FAA-approved AFM to include the following, which advises the flight crew of daily checks to verify proper operation of the elevator control system. Revision of the AFM may be accomplished by inserting a copy of this AD or AFM Revision 32, dated March 30, 1995, in the AFM.

NOTE 3: The daily check described in the AFM TR RJ/40, dated October 28, 1994, meets the requirements of this paragraph. Therefore, inserting a copy of TR RJ/40 into the AFM in lieu of this AD is considered an acceptable means of compliance with this paragraph.

"Elevator, Before Engine Start (First Flight of Day)

(1) Elevator.....Check Travel range (to approximately 1/2 travel) using each hydraulic system in turn, with the other hydraulic systems depressurized."

Inspections Required by AD 98-04-45

(c) For airplanes having serial numbers 7003 through 7049 inclusive: Within 12 months after April 3, 1998 (the effective date of AD 98-04-45, amendment 39-10356), perform the actions required in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, as applicable, in accordance with Section 2.B., Part A, of Canadair Regional Jet Service Bulletin S.B. 601R-27-040, Revision 'B,' dated September 11, 1995.

(1) Remove the shear pins and shear links of the flutter dampers and perform a visual inspection to detect any deformation or discrepancy of the flutter damper hinge fitting and lug of the horizontal stabilizer. Prior to further flight, replace any deformed or discrepant part with a serviceable part in accordance with the service bulletin.

(2) Perform a visual inspection to detect any deformation or discrepancy of the elevator hinge/damper fitting and shear pin lugs. Prior to further flight, replace any discrepant part with a serviceable part in accordance with the service bulletin.

(3) Perform a fluorescent penetrant inspection and a dimensional inspection to detect any deformation or discrepancy of the shear pin lugs. If any deformation or discrepancy is found on the lugs, prior to further flight, replace the elevator with a new or serviceable elevator in accordance with the service bulletin.

NOTE 4: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(d) For airplanes having serial numbers 7003 through 7054: Within 12 months after April 3, 1998 (the effective date of AD 98-04-45, amendment 39-10356), install new elevator flutter dampers (P/N 601R75142-7) in accordance with Section 2.B., Part B, of Canadair Regional Jet Service Bulletin S.B. 601R-27-040, Revision 'B,' dated September 11, 1995.

NEW REQUIREMENTS OF THIS AD:

Installation of Shear Pins

(e) For airplanes having serial numbers 7003 through 7142 inclusive, and 7144: Within 12 months after the effective date of this AD, install new shear pins (part number (P/N) 601R24063-31/S) in accordance with Part A of the Accomplishment Instructions of Canadair Regional Jet Service Bulletin S.B. 601R-27-100, Revision 'A,' dated March 10, 2000. After accomplishment of the installation of new shear pins, Canadair Regional Jet TR RJ/68-1, dated February 15, 2000, may be removed from the AFM.

Inspection of Maintenance Records

(f) For airplanes having serial numbers 7143, and 7145 through 7357 inclusive: Within 14 days after the effective date of this AD, perform a one-time inspection of the maintenance records to determine the replacement status of the shear pins of the elevator flutter dampers, in accordance with Part B of the Accomplishment Instructions of Canadair Regional Jet Service Bulletin S.B. 601R-27-100, Revision 'A,' dated March 10, 2000.

(1) If the maintenance records indicate that all shear pins were NOT replaced after delivery of the airplane, or if all shear pins were replaced with shear pins having P/N 601R24063-31/S: No further action is required by this AD.

(2) If the maintenance records indicate that any shear pin was replaced after delivery of the airplane with a shear pin having P/N 601R24063-31 or 601R24063-953, or if the maintenance records do not verify that all shear pins having P/N 601R24063-31/S are installed: Accomplish the requirements of paragraph (g) of this AD at the times specified in that paragraph.

AFM Revision and Replacement

(g) For airplanes on which any shear pin of the elevator flutter dampers of the elevators was replaced after delivery of the airplane with a shear pin having P/N 601R24063-31 or 601R24063-953, or for airplanes on which verification of shear pins having P/N 601R24063-31/S is not possible: Accomplish the requirements of paragraphs (g)(1) and (g)(2) of this AD at the times specified in those paragraphs.

(1) Within 30 days after the effective date of this AD, revise the Normal Procedures Section of the AFM by inserting Canadair Regional Jet TR RJ/68-1, dated February 15, 2000, in the AFM, which advises the flight crew of an additional first-flight-of-the-day check of the elevator control system.

(2) Within 12 months after the effective date of this AD, replace the shear pins with new, improved shear pins having P/N 601R24063-31/S, in accordance with Part C of the Accomplishment Instructions of Canadair Regional Jet Service Bulletin S.B. 601R-27-100, Revision 'A,' dated March 10, 2000. After accomplishment of the installation of new shear pins, the temporary revision required by paragraph (g)(1) of this AD may be removed from the AFM.

Spares

(h) As of the effective date of this AD, no person shall install a shear pin of the elevator flutter dampers having P/N 601R24063-31 or 601R24063-953 on any airplane.

Alternative Methods of Compliance

(i) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

NOTE 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

Special Flight Permits

(j) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(k) Except as required by paragraphs (a) and (b)(2) of this AD, the actions shall be done in accordance with Canadair Regional Jet Alert Service Bulletin S.B. A601R-27-041, dated October 28, 1994; Canadair Regional Jet Service Bulletin S.B. 601R-27-040, Revision 'B,' dated September 11, 1995; Canadair Regional Jet Service Bulletin S.B. 601R-27-100, Revision 'A,' dated March 10, 2000; and Canadair Regional Jet Airplane Flight Manual Temporary Revision RJ/68-1, dated February 15, 2000; as applicable.

(1) The incorporation by reference of Canadair Regional Jet Service Bulletin S.B. 601R-27-100, Revision 'A,' dated March 10, 2000; and Canadair Regional Jet Airplane Flight Manual Temporary Revision RJ/68-1, dated February 15, 2000; is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Canadair Regional Jet Alert Service Bulletin S.B. A601R-27-041, dated October 28, 1994; and Canadair Regional Jet Service Bulletin S.B. 601R-27-040, Revision 'B,' dated September 11, 1995; was approved previously by the Director of the Federal Register as of April 3, 1998 (63 FR 9928, February 27, 1998).

(3) Copies may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087 Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 6: The subject of this AD is addressed in Canadian airworthiness directive CF-2000-10, dated March 23, 2000.

Effective Date

(l) This amendment becomes effective on March 29, 2001.

FOR FURTHER INFORMATION CONTACT: Serge Napoleon, Aerospace Engineer, ANE-171, FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7512; fax (516) 568-2716.

Issued in Renton, Washington, on February 8, 2001.

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.